

# Work Order ID 52499

September 28, 2009 10:05:25 AM



Page 1

Item ID:	D2580-1	Accept		Setup	Start	
Revision ID:	D				Stop	
Item Name:	205 Skidtube bent detail					
Start Date:	29/09/2009	Start Qty:	2.00	Cust Item ID:		
Required Date:	02/10/2009	Req'd Qty:	2.00	Customer:		
Reference:						

Approvals:	Process Plan:		Date:	09-28	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2580	Rev D

100		0.00							
	HandFinish								
	Hand Finishing								
	Memo	0.00							
	1- Inspect mat'l D2500-1-190 for damage.								
	2- Chemical Conversion Coat as per QSI 005 4.1								

101		0.00							
	QC								
	Quality Control								
	Memo	0.00							
	QC3- Inspect Part Finish								
	9-10-27								

2 0 - ANN 9-10-20

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: 02580-1 <sup>→ 0205-634-041</sup> PAR #: \_\_\_\_\_ Fault Category: Skid tubes NCR: Yes No DQA: \_\_\_\_\_ Date: 05.10.28

Resolution: Scrap Disposition: Scrap QA: N/C Closed: \_\_\_\_\_ Date: 05.10.28

NCR: <u>52455</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>9/10/27</u>	<u>100</u>	Dent Found on side of skid tube in the center on the ridge. <del>Not</del> noticed prior to use & see sec. 100 memo, looked worse after a loading. <del>Re: possible damage during transport.</del> Re: LOA.	<u>[Signature]</u>	Scrap; replace tube. Qty 1 use for weld testing? bend & testing/development.	<u>AWM</u> <u>9-10-27</u>	<u>[Signature]</u> <u>05.10.27</u>	<u>[Signature]</u>	<u>S</u> <u>09/10/27</u>

NOTE: Date & initial all entries

# Work Order ID 52499

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Item ID:	D2580-1	Accept		Setup	Start	
Revision ID:	D				Stop	
Item Name:	205 Skidtube bent detail					
Start Date:	29/09/2009	Start Qty:	2.00	Cust Item ID:		
Required Date:	02/10/2009	Req'd Qty:	2.00	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 	Skidtubes	0.00							
	Memo	0.00				2	-	-	Aug 9-10-26
	1-Drill pilot holes using drill jig DT 8149 (Do not use cutting fluid)								
	2-Open holes to 0.500" as per Dwg D2580 without cutting fluid								
	3-Deburr and blow out all chips from inside of tube								
	4-Bond web in place per QSI 015.								
	□□								
	A/R Sikaflex-291 batch: M112391								
	Sikaflex expire date: -10-02-10								
	Start time: bond for 12hrs - 2:00								
130 	QC5- Inspect part completeness to step on W/O	0.00							
	Memo	0.00				2			OC 9-10-28
	Quality Control								

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Item ID: D2580-1

Accept



Setup Start



Revision ID: D

Stop



Item Name: 205 Skidtube bent detail

Start Date: 29/09/2009 Start Qty: 2.00



Cust Item ID:

Required Date: 02/10/2009 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 	Identify as per dwg & Stock Location: <u>L-6</u>	0.00				<u>2</u>	<u>-</u>	<u>-</u>	<u>AWM 9-10-27</u>
Packaging	Memo	0.00							
Packaging									
150 	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

MF  
09-10-28

# Picklist Print

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Work Order ID: 52499



Parent Item: D2580-1RevD



Parent Item Name: 205 Skidtube bent detail

Start Date: 29/09/2009

Required Date: 02/10/2009

Comments:

Start Qty: 2.00

Required Qty: 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2500-1-190RevG		Manufactured	No				Each	71.0000	2.0000			
Ext'n -1' Beam Tube 4"												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	65	
50166	65	
Main Warehouse		
ST	6	
46468	6	

AWR 9-10-20 (2)

D2596RevD

Manufactured No

110

Each

12.0000

2.0000



Web, 205 Skidtube

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	12	
51528	12	

AWR 9-10-20 (2)

**DART**

DESIGN #	DRAWN BY PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07-06-28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

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WORK ORDER  
NO. 52499

PH  
09-4-28

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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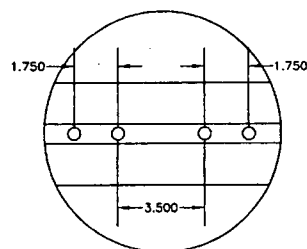


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WORK ORDER

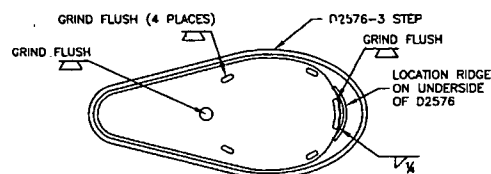
NO. 52499

09-4-28

DETAIL A  
SCALE 5:24

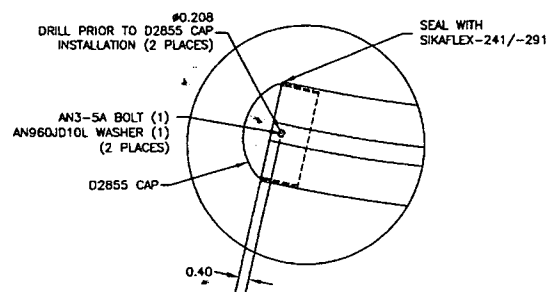


DETAIL B  
SCALE 5:24

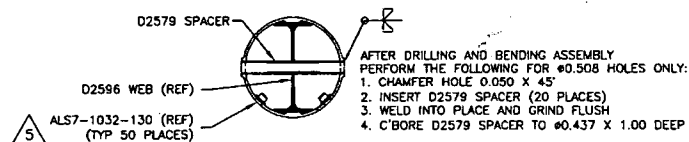


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07 06 28

DETAIL C  
SCALE 5:24



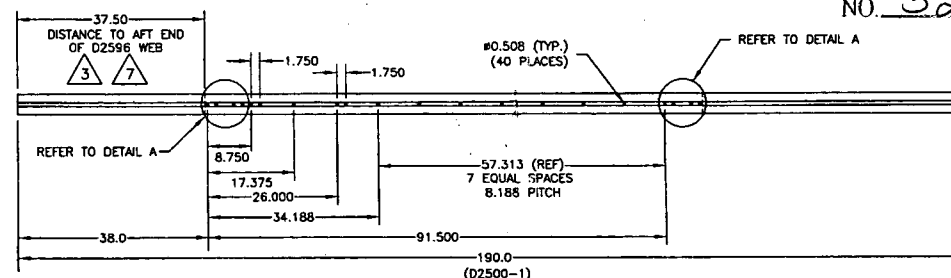
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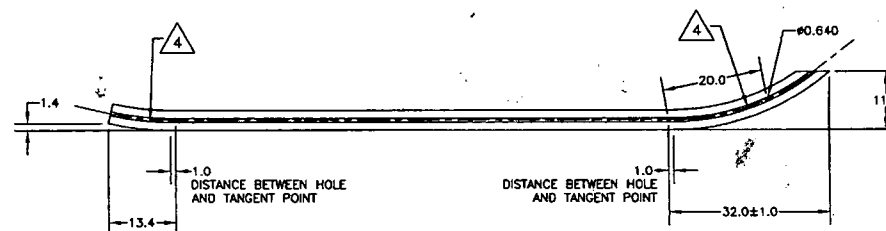
D2580-041 NOTES

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

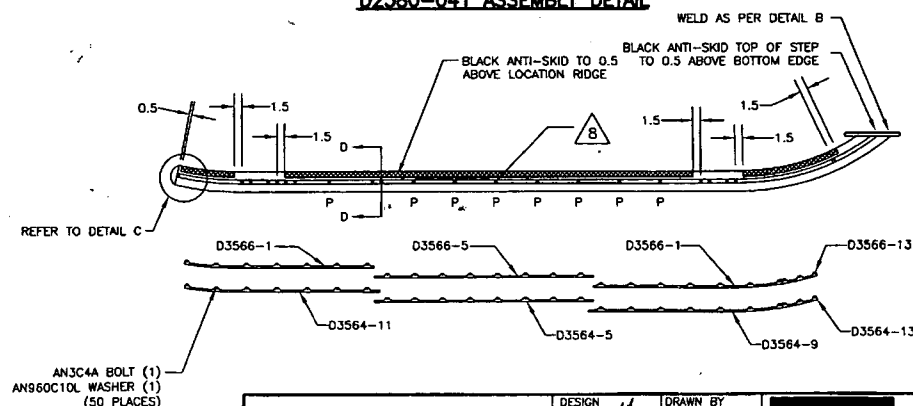
D2580-1 DRILLING DETAIL



D2580-1 BENDING AND CUTTING DETAIL



D2580-041 ASSEMBLY DETAIL



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DESIGN	DRAWN BY	<b>DART</b>	DART AEROSPACE LTD. MILLSBORO, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2580	REV. D SHEET 2 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24



~~WITHOUT AGENTS~~

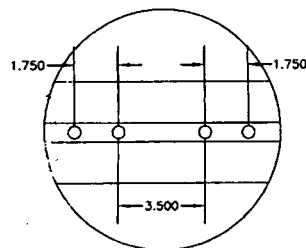
## WORK ORDER

NO. 52499

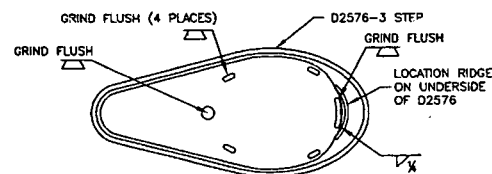
NO. 52499

09-9-20

**DETAIL E**  
SCALE 5:24

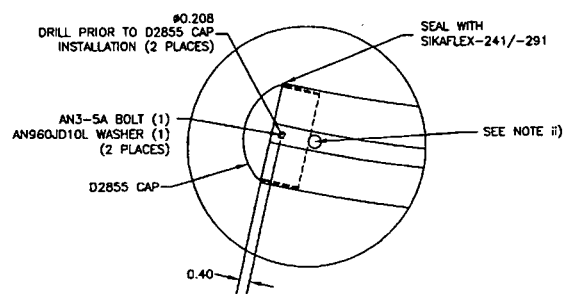


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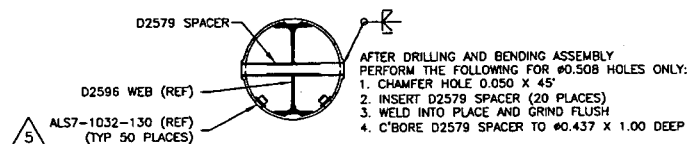


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**DETAIL G**  
SCALE 5:24



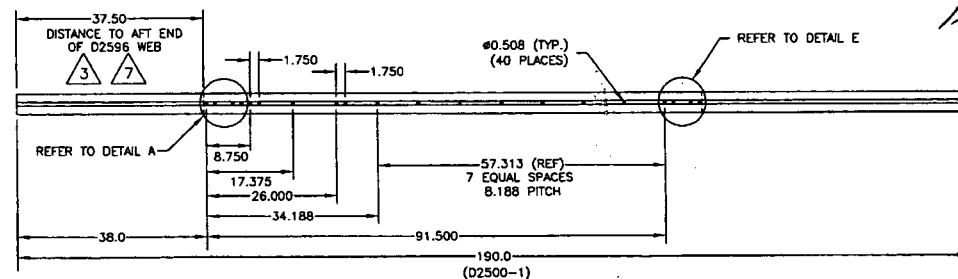
**SECTION H-H**  
**SCALE 5:24**



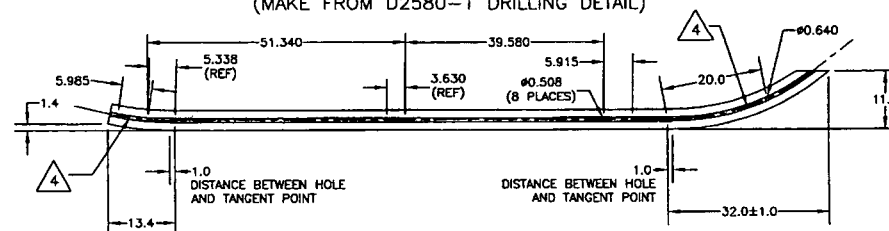
**D2580-045 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE  
WITH THE SPACER AT THIS LOCATION

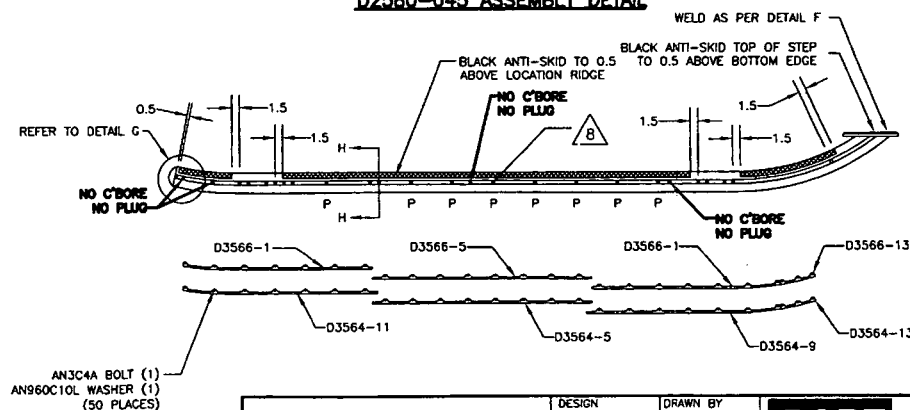
D2580-1 DRILLING DETAIL



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



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HAMPSHIRE, ONTARIO, CANADA

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--	------------

02580

205 SKIDTUBE ASSEMBLY

REV. D

SHEET 3 OF 3

1:24